Comments

L-0052/003

The Nez Perce Tribe considers the protection, preservation and perpetuation of cultural resources at Hanford for future generations in a spirit of stewardship to be of the utmost priority. It should be noted that biological resources and other natural resources are considered cultural resources by the Nez Perce Tribe [NPT].

DOE recognizes there is a disproportionate impact of the alternatives in this EIS on the natural and cultural resources of the tribal nations (as stated in Section 5.13, Volume I). The NPT recognizes an inherent right to those resources, and understands DOE has the obligation to honor and protect those resources. How does DOE intend to mitigate the inequities caused by these impacts? Furthermore, can we truly expect LTS [long-term stewardship] measures to last 8,000 to 10,000 years?

The ERWM is concerned about the future of the LTS and Institutional Control (IC) decisions made by DOE Office of Environmental Management, when this responsibility will be deferred to the DOE Office of Legacy Management (OLM) beginning in FY 2004. The HSW EIS makes no mention of how the LTS functions will transition into the new OLM. Where is the infrastructure for LTS, and what insures its viability? The 2004 budget for the OLM is not sufficient to give the ERWM confidence that long-term stewardship issues will be adequately addressed regarding the waste being discussed in this EIS.

Because of these long-term stewardship concerns, the HSW-EIS in its current configuration is insufficient to persuade the NPT and the ERWM to support the activities proposed in any of the alternatives. The decisions determined within these alternatives will not protect the resources, including water, which are sacred to the NPT. ERWM does not feel that the level of awareness of LTS as expressed by DOE in this EIS is adequate.

Response

DOE is cognizant of the concern of Native Americans and others regarding operations at Hanford. Extensive effort has been made to provide quantitative analysis of potential impacts.

DOE does not and will not rely solely on long-term stewardship to protect people and the environment. As indicated in the DOE sponsored report "Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites" (National Research Council 2000), "contaminant reduction is preferred to contaminant isolation and the imposition of stewardship measures." Contaminant reduction is a large part of the ongoing cleanup efforts at Hanford. Most of the analyses in the HSW EIS are based on the assumption that long-term institutional controls would no longer be in effect 100 years after closure (about 2150 AD). Long-term groundwater impacts and subsequent human health impacts were determined based on the assumption that caps would degrade and eventually provide no protection (see Volume I Sections 5.3 and 5.11 and Volume II Appendices F and G). In addition, "intruder scenarios" are analyzed to determine the impacts of gaining access to the site (i.e., no institutional controls) and digging or drilling into waste sites. See Volume I Section 5.11.2.2 and Volume II Appendix F Section F.3. Further information on DOE's long-term stewardship activities can be found in the DOE Long-Term Stewardship Study (DOE 2001a). The discussions of long-term stewardship in Volume I Sections 2.2.7 and 5.18 of the HSW EIS have been revised in response to comments.

The HSW EIS evaluates impacts to the Columbia River and downstream populations for about 10,000 years. For all alternatives analyzed in this HSW EIS, DOE has analyzed the long-term movement of contaminants through soil and groundwater to the Columbia River. In all cases, it found that the water quality of the Columbia River would be virtually indistinguishable from the current river background levels. The concentrations of all the constituent contaminants were well below benchmark drinking water standards at a hypothetical well located near the Columbia River. The impacts of groundwater reaching the river are discussed in Volume I Sections 5.3 and Volume II Appendix G. See also Volume I Section 5.11 and 5.14 and Volume II Appendixes F and L.

Comments

E-0043/061, EM-0217/061, EM-0218/061, L-0056/061, LM-0017/061, LM-0018/061

DOE should recognize that the impacts of sauna/sweat lodge scenario shown in table S.3 will likely have a disproportional impact on Native Americans. This is an environmental justice impact and should be quantitatively analyzed and reported on as such for all alternatives. Native Americans residing in the areas near the Hanford Site use saunas/sweat lodges as part of their cultural and religious practices and traditions. Additionally, all possible impacts on Native American populations who by treaty right may enter the Hanford Site should be analyzed quantitatively separate from the analysis of impacts on 'intruders' and the general public within the Hanford Site vicinity.

Response

DOE is cognizant of the concerns of Native Americans and others that operations at Hanford, including those discussed in this HSW EIS, could potentially adversely impact Native Americans and their lifestyle. This HSW EIS includes discussion of potential impacts to cultural resources in Volume I Section 5.7, aesthetic and scenic resources in Volume I Section 5.12, and environmental justice in Volume I Section 5.13.

The HSW EIS uses two exposure scenarios to evaluate the potential impacts to humans from solid waste management activities: industrial and resident gardener (agricultural). For waterborne pathways, an additional analysis has been performed for the resident gardener scenario to include a sauna/sweat lodge exposure pathway (indicated in the result tables of Volume II Appendix F as the hypothetical resident gardener with sauna/sweat lodge). These scenarios were chosen to represent a range of habits and conditions for potential exposures. The industrial and resident gardener scenarios are based on the recommendations presented in the Hanford Site Risk Assessment Methodology (HSRAM) as adopted by the TPA. These scenarios are based on the concept of reasonable maximum exposure as recommended by EPA for which the most conservative parameter is not always used. The resident gardener with a sauna/sweat lodge scenario also includes exposure to waterborne contamination used in a sweat lodge or sauna. The resident gardener with a sauna/sweat lodge scenario is only applied to waterborne pathways because the airborne pathways do not contribute to the sauna/sweat lodge exposure pathways. See Volume II Appendix F.

Comments

L-0055/012

This EIS is just evaluating new MLLW and LLW brought in for disposal at Hanford. It is not looking at all the other waste currently buried or disposed of on site. This new waste will result in an exposure of up to 3000 mrem per year and a 1 in 10 fatality of Native Americans and others living on this site who wishes to practice their Native American way of life. The death of 10 percent of our population is not acceptable. This will result in not only the death of our people, but also the disruption in our ability to pass on our culture. These deaths are principally associated from exposure to uranium.

L-0055/032

The disposal of solid waste would add only a small contribution to projected doses for people in the highly unlikely event that they were to drink from groundwater. However, the “unlikely” use of saunas and sweat lodges would result in doses at about 8,000 years hence that “might” be of concern. Mitigation plans include land-use covenants and active and passive institutional controls for as long as needed in the future. This just reflects DOE’s lack of concern for the Native Americans and the Native American lifestyle. It is DOE’s assumption that a sweat lodge is unlikely.

Response

DOE is cognizant of the concerns of Native Americans and others that operations at Hanford, including those discussed in this HSW EIS, could potentially adversely impact Native Americans and their lifestyle. This HSW EIS includes discussion of potential impacts to cultural resources in Volume I Section 5.7, aesthetic and scenic resources in Volume I Section 5.12, and environmental justice in Volume I Section 5.13.

Native American Concerns

As stated in Volume I Section 6.13, none of the activities involved in the HSW EIS would occur on open and unclaimed lands.

Comments

L-0054/004

USDOE's non-responsiveness has denied Tribal policy makers from ensuring that Treaty rights and resources are protected as part of the action. USDOE's actions are inappropriate given the significance of impacts associated with the proposed action that include: tribal human health, cultural and ecological resources, direct and indirect cumulative impacts, and environmental justice.

Response

DOE is cognizant of the concerns of Native Americans and others that operations at Hanford, including those discussed in this HSW EIS, could potentially adversely impact Native Americans and their lifestyle. This HSW EIS includes discussion of potential impacts to cultural resources in Volume I Section 5.7, aesthetic and scenic resources in Volume I Section 5.12, and environmental justice in Volume I Section 5.13.

Uranium migrates very slowly through the ground and is not expected to impact areas much greater than one kilometer beyond the disposal facility boundaries within the next 10,000 years. In addition, access to the groundwater at depths of several hundred feet would require industrial techniques.

As stated in Volume I Section 6.13, none of the activities involved in the HSW EIS would occur on open and unclaimed lands.

Comments

L-0054/001

In developing the SWEIS, USDOE failed to implement its trust responsibility to consult with the Yakama Nation (YN). Such consultation is mandatory, and is to be initiated by USDOE as a partial fulfillment of the legally enforceable trust obligation. … Provision of draft EIS documents to a Tribal government does not constitute consultation. Consultation entails government-to-government interactions in accordance with formal communication protocols.

Response

DOE has made efforts to involve and coordinate with the Yakama Nation during the development of the HSW EIS. After informal discussions, DOE formally agreed on April 13, 1998 to a Yakama Nation request to help prepare the HSW EIS. Yakama Nation staff participated in the preparation of the HSW EIS for a time. After formal and informal inquiries from DOE regarding continued participation the Yakama Nation formally decided on February 27, 2003 it no longer wanted to help prepare the HSW EIS. Correspondence between DOE and the Yakama Nation on the HSW EIS is included in Volume I Section 7 of the HSW EIS and in the administrative record. Copies of the HSW EIS were formally and informally provided to the Yakama Nation for comment. DOE is working and will continue to work with the Yakama Nation to improve timeliness, regularity, and frequency of communication at the staff and higher levels on all matters including preparation of environmental impact statements.

Comments

L-0055/035

For these reasons we believe the estimate of 10% death rate for our [Umatilla Indian] future generations living at Hanford is an underestimate. However, even if we were to assume that the 10% death rate were accurate, it is still extremely unacceptable. One must ask themselves if they would be willing to assume this risk for their families. I think the answer for each of us would be a resounding NO! Such a decision by DOE represents the worst kind of environmental injustice imaginable as they are knowingly and willingly establishing conditions that will kill a major portion of a minority people.

L-0055/036

To our [Umatilla Indian] nation the death of 10% of our future generation represents to us not just the death of our people, but also the disruption in our ability to pass on our culture. These deaths are principally associated from exposure to uranium. Many of the other radionuclides were not included in this EIS. It is our belief that this may even be an understatement of the number of fatalities that would result from the disposal of the MLLW and the LLW at Hanford. In addition, we believe that the time-scale may be in error. The migration of radionuclides into the ground water has consistently occurred much sooner than DOE has predicted or modeled, we believe that the peak in the dosage may also occur sooner than DOE has lead us to believe. Institutional Controls would be inadequate to protect our people from these hazards. This area is the traditional homeland of the Tribes of this area. Our Tribes would like to reoccupy these lands when DOE has left. They must be protected from these hazards for all time.

L-0055/044

In Table S.3, that for the Native American or resident gardener who has a sweat lodge or sauna, the chance of getting cancer from the upper bound waste scenario is 1 in 10. This is not an acceptable risk to the Native Americans. Even the other communities have a 1 in 50 or 1 in 200 chance. These are still unacceptable risk numbers. For fatalities greater than 10,000, the analysis only looked at the areas in the Tri-Cities, WA and in Portland, OR. In addition, the risk is understated since the analysis was for a hypothetical well located 1 km from the boundary of the burial site. This understates the potential contamination. For regulatory purposes, the danger should be calculated at the burial grounds boundary.

L-0055/047

A hypothetical Native American or resident gardener with a sweat lodge or sauna, has, within a 10,000 year period, a chance of a cancer fatality of 1 in 10. This is primarily due to uranium in the ground water. There is currently uranium in the ground water under the 200 area and there has been a recent increase in the uranium plume in the 300 area. In addition, scenarios should be evaluated for other radionuclides. A 1 in 10 fatality from cancer in unacceptable and shocking that this would be allowed.

Response

Uranium migrates very slowly through the ground and is not expected to impact areas much greater than one kilometer beyond the disposal facility boundaries within the next 10,000 years. In addition, access to the groundwater at depths of several hundred feet would require industrial techniques.

The maximum point of impact from multiple and widely dispersed sources may not necessarily be directly underneath the Low Level Burial Grounds or at the Low Level Burial Ground boundary. To model the groundwater impacts from multiple and widely dispersed disposal units over long periods of time, a 1-km point of analysis location was deemed to be more appropriate and representative than a regulatory point of compliance well location, for purposes of NEPA analysis. The point of analysis approach is considered technically appropriate for a NEPA evaluation of groundwater impacts over the long-term (10,000 years) time period analyzed. The 1-km point of analysis is not intended to represent the proposed locations for actual monitoring wells that would be used during the operational and closure time period. Groundwater impacts at the facility boundary (about 100 meters) have been added to the impacts identified for the preferred alternative and are discussed qualitatively for the other alternatives. A discussion of the differences between

the 1-km point of analysis and the disposal facility boundary is provided in Volume I Section 5.3 and Volume II Appendix G.

DOE does not and will not rely solely on long-term stewardship to protect people and the environment. As indicated in the DOE sponsored report "Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites" (National Research Council 2000), "contaminant reduction is preferred to contaminant isolation and the imposition of stewardship measures." Contaminant reduction is a large part of the ongoing cleanup efforts at Hanford. Most of the analyses in the HSW EIS are based on the assumption that long-term institutional controls would no longer be in effect 100 years after closure (about 2150 AD). Long-term groundwater impacts and subsequent human health impacts were determined based on the assumption that caps would degrade and eventually provide no protection (see Volume I Sections 5.3 and 5.11 and Volume II Appendices F and G). In addition, "intruder scenarios" are analyzed to determine the impacts of gaining access to the site (i.e., no institutional controls) and digging or drilling into waste sites. See Volume I Section 5.11.2.2 and Volume II Appendix F Section F.3. Further information on DOE's long-term stewardship activities can be found in the DOE Long-Term Stewardship Study (DOE 2001a). The discussions of long-term stewardship in Volume I Sections 2.2.7 and 5.18 of the HSW EIS have been revised in response to comments.

As stated in Volume I Section 6.13, none of the activities involved in the HSW EIS would occur on open and unclaimed lands.